

Title : Development of permanent magnet based EM pump and non-contact flow meter for high temperature liquid metals



Brief Description: A permanent magnet based electromagnetic pump has been design and developed for pumping high temperature liquid metals like PbLi ,PbBi , Na etc. These pumps create the required pressure head due to Lorentz force and the performance characteristics of the EM pump is experimentally investigated in a room temperature liquid metal loop. The flow rate of the liquid metal is measured using indigenously developed non-contact type phase shift flow meter, which is presently installed in the loop.

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Possible applications: The same technology can be used for high temperature liquid metal cooled reactors and other high temperature liquid metals used in metal purification industry.